

OUTLINES OF
PHRENOLOGY

COMBE

1838

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18
OUTLINES

OF

PHRENOLOGY.

BY

GEORGE COMBE.

RES NON VERBA QUÆSO.

SEVENTH EDITION.

EDINBURGH:

MACLACHLAN & STEWART, AND JOHN ANDERSON JUN.
SIMPKIN, MARSHALL & CO., LONDON; JOHN MACLEOD, GLASGOW;
W. GRAPEL, LIVERPOOL; AND MARSH, CAPEN & LYON,
BOSTON, UNITED STATES.

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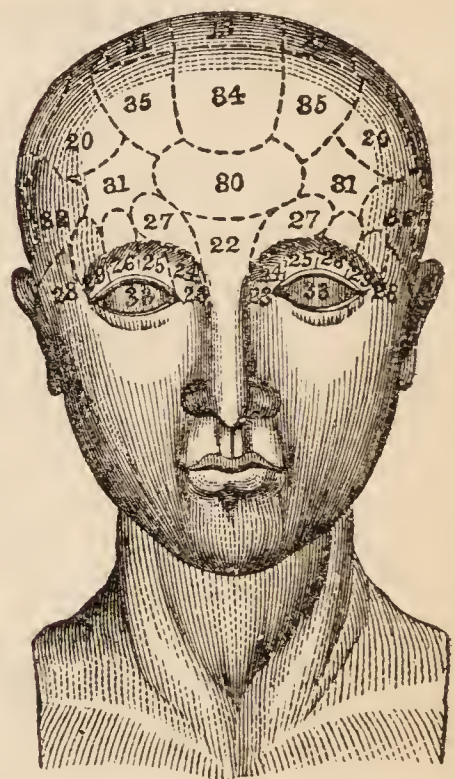
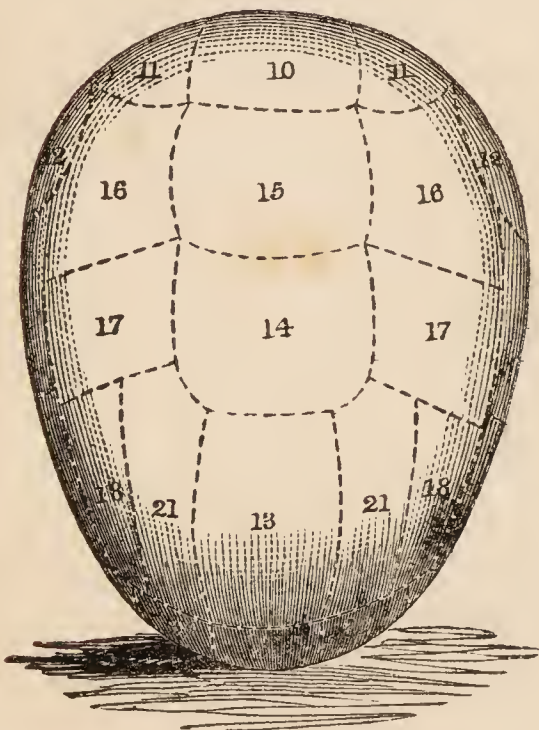
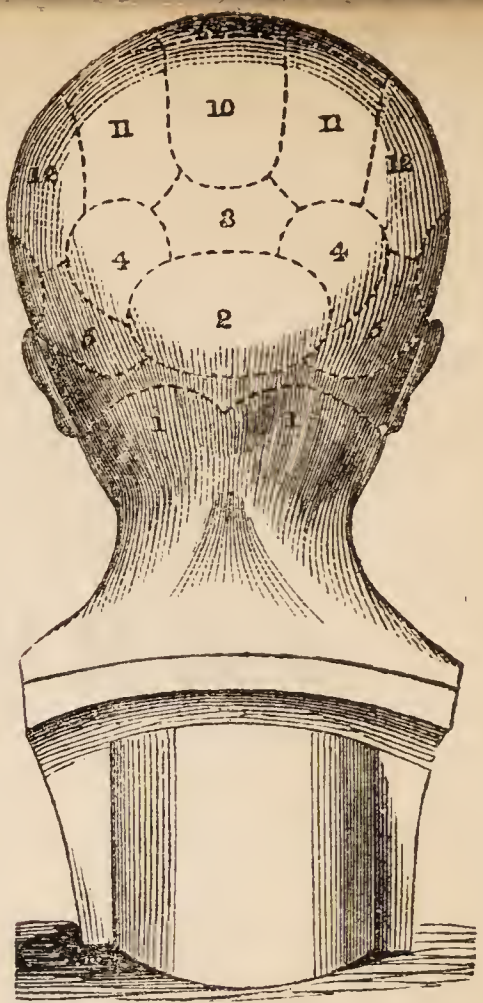
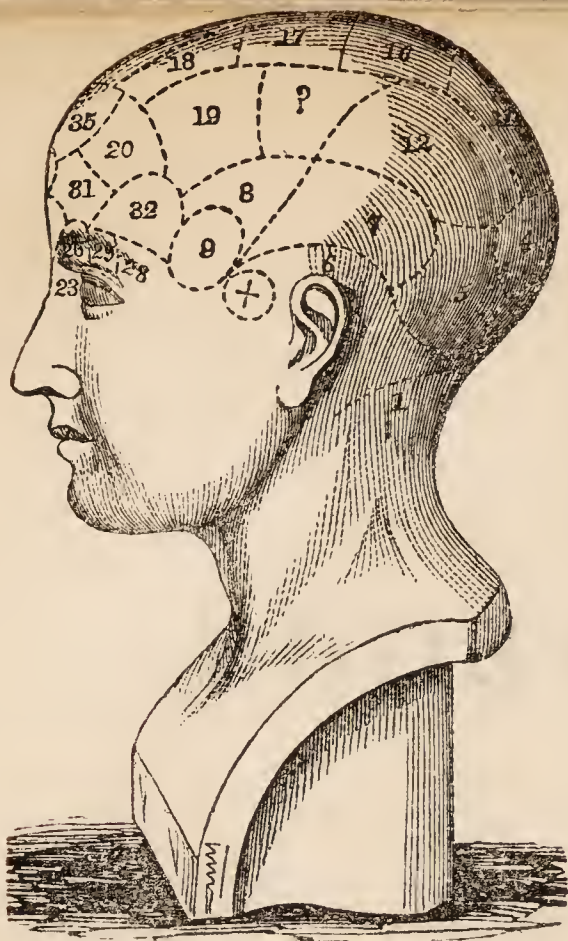
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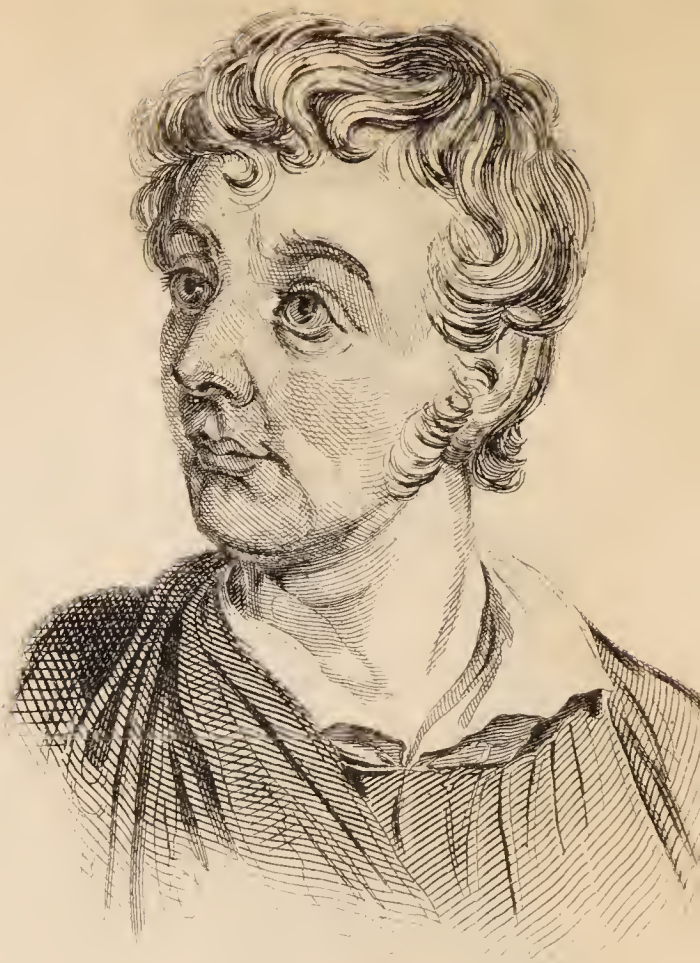


NAMES OF THE PHRENOLOGICAL ORGANS,
REFERRING TO THE FIGURES INDICATING THEIR RELATIVE POSITION.

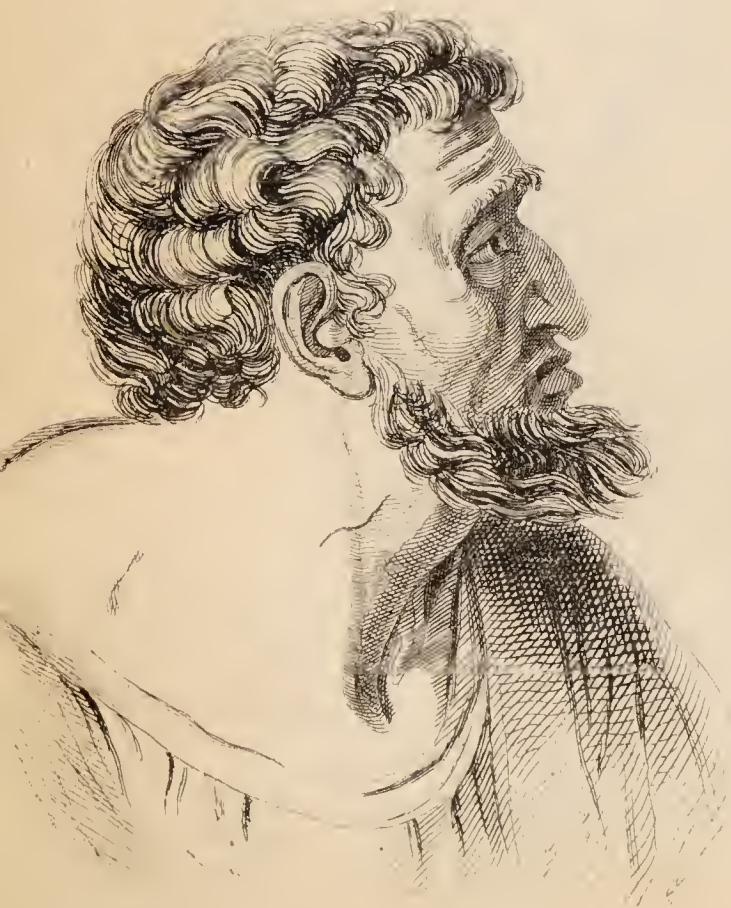
AFFECTIVE.		INTELLECTUAL.	
I. PROPENSITIES.	II. SENTIMENTS.	I. PERCEPTIVE.	II. REFLECTIVE.
1 Amativeness P. 8	10 Self-Esteem, . . . P. 12	22 Individuality P. 18	34 Comparison P. 23
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LYMPHATIC



SANGUINE



BILIOUS



NERVOUS



7th

OUTLINES OF PHRENOLOGY.

INTRODUCTORY OBSERVATIONS.

PHRENOLOGY (derived from two Greek words, *Phren*, mind, and *Logos*, discourse) treats of the faculties of the Human Mind, and of the organs by means of which they manifest themselves ; but it does not enable us to predict actions.

Dr Gall, a physician of Vienna, is the founder of the system. He was born at Tiefenbrun, in Suabia, on 9th March 1757, and died at Paris on 22d August 1828. From an early age he was given to observation, and was struck with the fact, that each of his brothers and sisters, companions in play, and schoolfellows, was distinguished from other individuals by some peculiarity of talent or disposition.

The scholars with whom Dr Gall had the greatest difficulty in competing, were those who learned by heart with great facility ; and such individuals frequently gained from him, by their repetitions, the places which he had won by the merit of his original compositions. He observed that his schoolfellows, so gifted, possessed prominent eyes. When he entered the University, he directed his attention, from the first, to the students whose eyes were of this description, and found that they all excelled in getting rapidly by heart, and giving correct recitations, although many of them were by no means distinguished in point of general talent. Dr Gall could not believe that the coincidence of the two circumstances was entirely accidental. From this period, therefore, he suspected that they stood in an important relation to each other. After much reflection, he conceived, that if Memory for words was indicated by an external sign, the same might be the case with the other intellectual powers ; and thereafter, all individuals distinguished by any remarkable faculty became the objects of his attention. By degrees, he conceived himself to have found external characteristics, which indicated a decided disposition for Painting, Music, and the Mechanical Arts. He became acquainted also with some individuals remarkable for the determination of their character, and he observed a particular part of their heads to be very largely developed. This fact first suggested to him the idea of looking to the head for signs of the Moral Sentiments. But in making these observations, he never conceived, for a moment, that the *skull* was the cause of the different talents, as has been erroneously represented ; for, from the first, he referred the influence, whatever it was, to the Brain.

Dr Gall, therefore, abandoning every theory and preconceived opinion, gave himself up entirely to the observation of nature. Being a friend to Dr Nord, Physician to a Lunatic Asylum in Vienna, he had opportunities, of which he availed himself, of making observations on the insane. He visited prisons, and resorted to schools; he was introduced to the courts of princes, to colleges, and the seats of justice; and wherever he heard of an individual distinguished in any particular way, either by remarkable endowment or deficiency, he observed and studied the development of his head. In this manner, by an almost imperceptible induction, he conceived himself warranted in believing, that particular mental powers are indicated by particular configurations of the head.

In every instance, when an individual, whose head he had observed while alive, happened to die, he used every means to be permitted to examine the brain, and frequently succeeded. He found, as a general fact, that, on removal of the skull, the brain, covered by the dura mater, presented a form corresponding to that which the skull had exhibited in life.

The successive steps by which Dr Gall proceeded in his discoveries, are particularly deserving of attention. He did not, as many have imagined, first dissect the brain, and pretend by that means to discover the seats of the mental powers; neither did he, as others have conceived, first map out the skull into various compartments, and assign a faculty to each, according as his imagination led him to conceive the place appropriate to the power. On the contrary, he first observed a concomitance betwixt particular talents and dispositions, and particular forms of the head; he next ascertained, by removal of the skull, that the figure and size of individual parts of the brain are indicated by these external forms; and it was only after these facts were determined, that the brain was minutely dissected, and light thrown upon its structure.

At Vienna, in 1796, Dr Gall for the first time delivered lectures on his system.

In 1800, Dr J. G. Spurzheim (born at Longuich, near Tréves, on the Moselle, on 31st December 1776) began the study of Phrenology under him, having in that year assisted, for the first time, at his lectures. In 1804, he was associated with him in his labours; and after that period he not only added valuable discoveries to those of Dr Gall in the anatomy and physiology of the brain, but assisted in forming the truths brought to light by their joint observations, into a beautiful and interesting system of mental philosophy. In Britain we are indebted chiefly to his personal exertions and printed works for a knowledge of the science. Dr Spurzheim died at Boston, United States, on 10th November 1832.

An outline of their philosophy will be given in the following pages.

A mental organ is a material instrument, by means of which the mind, in this life, enters into particular states, active and passive.

The mind is regarded as simple, and its substance or essence is unknown. It is furnished by nature with highly interesting susceptibilities, and a vast apparatus of mental organs, for enabling it to manifest its energies, and enter into different states. Thus, when aided by optic and auditory nerves, the mind sees and hears; when assisted by an organ of Cautiousness, it feels fear; by an organ of Causality, it reasons. Its power of seeing depends on the perfection of the eyes and the optic nerves; and in like manner its power of experiencing the emotion of beauty is in proportion to the perfection of the organ of Ideality. The optic nerve, when stimulated by light, induces the active state, called See-

ing, in the mind ; and the organ of Benevolence, excited by an object in distress, produces the mental state called Compassion.

States of mind are either simple or complex. A simple state results from the action of a single organ on the mind ; Seeing is a simple state arising from the activity of the optic nerves. Complex states are produced when the mind is acted upon by several organs at the same time. Thus, suppose that an insult is offered to an individual in an august assembly, Self-Esteem will produce the feeling of offended dignity ; and Destructiveness will give the desire of revenge ; Veneration, however, will call up the emotion of respect or awe for the personages present ; and Cautiousness and Love of Approbation will give rise to the fear of offending them ; and all these contending emotions may co-exist. Hence, the mind, simple in itself, may, by means of a plurality of organs, exist in a state of complex relations to other objects.*

Physiologists, nearly without any exception, now treat of the brain as the material instrument on which the manifestations of the mind depend.

The next inquiry is, whether it is a single organ, the *whole* of which is employed in *every* act of the mind, or an aggregate of parts, each serving as the organ of a particular mental power ?

The following considerations lead us to regard the brain as an aggregate of distinct organs. 1. The mental faculties appear and come to maturity successively, just as in some animals hearing precedes sight. 2. Genius is generally partial : a man is often an excellent musician, who has no talent for painting or metaphysics. 3. In dreaming, one or more faculties are awake, while others are asleep ; and if all acted by means of one organ, they could not possibly be in different states at the same time. 4. Idiocy and insanity are generally partial, which could not be, if all the faculties depended on one organ. 5. Partial injuries of the brain do not equally affect all the mental powers ; which they would do, if the organ of the mind were single. These considerations have led anatomists, from the days of Galen downwards, to regard the brain as a congeries of organs. So early as 1560, Dolci, an Italian author, gave a drawing of a head, with organs delineated on it for different faculties ; and he was followed by many other writers. They failed in their attempts to locate the faculties, in consequence of taking their own conceptions of fitness, and not actual observation, for their guide : Dr Gall trusted to observation alone. It is a principle in physiology, that *dissection* alone does not reveal the *function* of any organ. The organ must be observed when acting. It is a fact in mental philosophy that we have no consciousness even of the existence of mental organs. Dr Gall, therefore, in order to discover the functions of the different parts of the brain, did not rely on dissection, or on reflection on consciousness, but simply compared the size of cerebral parts with the energy of mental manifestations.

Physiological authors in general agree that the brain gives the form to the skull. Cuvier, Monro, Blumenbach, Lawrence, and many other anatomists, state this. The outer surface of the skull corresponds to the inner surface, and represents its form accurately ; under the following exceptions.

After twelve years of age, a separation generally takes place between the inner and outer surfaces (in anatomical language called tables), of the

* This doctrine was first clearly elucidated by the Rev. Dr David Welsh, in his excellent *Life of the late Dr Thomas Brown*, Note N, p. 519.

skull, which extends under the spaces marked 22, 23, 24, and 25, on the Plate. The hole between the two surfaces at these parts is called the frontal sinus, and its existence throws a degree of uncertainty over the development of the organs indicated by these numbers. When the sinus exists, there may be an outward rising of the skull at these places, without a corresponding development of brain below, and, in consequence, the manifestations of the faculties will not be so powerful as the external elevation indicates. But if the skull at these places be depressed, the brain will be found little developed there, and the corresponding faculties will invariably be feebly manifested. It is, therefore, only in cases of enlargement that the sinus causes uncertainty, which is, in general, confined to the organs here enumerated.

After the middle period of life, a general decay of the body begins to take place, in which the brain participates. It diminishes in size, and sometimes the inner surface of the skull follows the shrinking faster than the outer surface, causing either an increase of the spongy texture between them, or a general thickening of the skull. In disease, the same thing often happens. In other cases, the skull becomes thinner in old age. For these reasons, phrenologists look for demonstrative evidence *in healthy individuals, not beyond the middle period of life*. In such persons, the divergence from parallelism between the outer and inner surfaces of the skull, does not, in general, exceed one-eighth part of an inch; whereas the differences of size in particular parts of heads, otherwise equal in general dimensions, extend occasionally to one inch and a quarter, as may be seen by contrasting the busts of Mr Joseph Hume and Dr Chalmers, in the region of Ideality.

Common observation warrants us in believing that human dispositions and talents may be distinguished. One man is remarkable for pride, another for vanity, a third for avarice, a fourth for generosity, a fifth for musical talent, a sixth for skill in painting, and so on. These dispositions and talents, therefore, may be compared with development of brain.

These positions being granted, the *possibility* of Dr Gall's discoveries becomes evident, and the question resolves itself into one merely of evidence. As human beings every where exist and manifest their faculties, the means of proving or disproving the truth of what Dr Gall has reported, are within the reach of every person who chooses to qualify himself by study for making observations and drawing conclusions. Phrenologists, therefore, do not rely on recorded cases as evidence. They adduce these as illustrations and examples merely, and refer every student to nature, stating that philosophical conviction can be founded only on individual observation.

The brain differs in different individuals, not in size merely, but in quality or constitution; and this fact must always be attended to. If in any one person we compare the manifestations of the organs which are small with those of the organs which are large, the power of manifestation will, as a general rule, be found greatest in the latter, and that in proportion to their size; because, in general, the whole of a man's brain is of the same quality or constitution, and fair scope is given to the influence of size. But if we compare the manifestations of any particular organ in John and in James, the size may be the same, yet James may manifest the faculty with the greater vigour. This may arise from the quality or constitution of James's brain being superior, or from his having exercised the organ in question, whereas John had left it in dor-

mancy. If we compare James's organs with each other, and John's organs with each other, we shall find that the power of manifestation will, in general, correspond to their respective dimensions; or if we compare James's brain with that of another individual who has the same constitution, and has received the same training, we shall find the effects of size appearing invariably the same. The correct proposition, therefore, is, that, *other conditions being equal*, or *cæteris paribus*, size is a measure of power; and this principle also is admitted by physiologists. Cuvier, speaking of the brain, says, that "*comparative anatomy offers another confirmation of the constant proportion between the size of these lobes and the degree of intelligence of animals.*"

The quality or constitution of the brain partakes of that of the body generally, and this is indicated by the temperaments. There are four temperaments. First, the *lymphatic*, distinguishable by roundness and softness of the muscular system, fair hair, a pale clear skin, and a hazy sleepy eye. It is accompanied by slow and languid action in the vital organs, including the brain. The second, or *sanguine* temperament, is indicated by well defined forms, tolerable firmness of flesh, light hair, inclining to chestnut, blue eyes, a fair complexion, with ruddiness of countenance. It is attended by great activity in the bloodvessels, and fondness for exercise; and the brain partakes in the general vivacity of the system. The third, or *bilious* temperament, does not mean a temperament particularly liable to the *disease* bile, as the name might indicate, but a certain constitution of body, which is recognised by black hair, dark skin, moderate fulness and much firmness of flesh, with harshly expressed outlines of the person. The functions partake of great energy, which extends to the brain. The fourth, or *nervous* temperament, is recognised by fine thin hair, thin skin, small thin muscles, quickness in muscular motion, paleness of countenance, and often delicate health. The whole nervous system, including the brain, is predominantly active, and the mental manifestations are proportionally vivacious.

In comparing different brains, we should always attend to the temperaments; because two brains may be of the same size, but if the one be of the lymphatic, and the other of the nervous temperament, there will be great difference in the powers of manifesting the faculties.

Education or exercise increases the activity of the brain, and should also be taken into account in comparing different brains. If at first two individuals possessed brains of the same size, form, and temperament, but if the one wrought in a coal-pit, and the other made speeches in Westminster Hall and Parliament, until they had respectively attained fifty years of age, the power of manifesting the faculties would be much greater in the latter. Or, if in two individuals the size of the organs of the propensities was the same, but if in the one the moral organs were large, so that they had controlled, during life, the action of the propensities, and if in the other the moral organs were small,—at fifty years of age, the propensities of the former would have lost much power by constant restraint, whereas those of the latter would continue to act with greater energy, from having been habitually indulged. The effects of education, however, are limited by the size of the organs. When these are very defective, education is impossible; when they are large, and the temperament active, the individual educates himself.

The proper way to test the effects of size, is to compare brains agreeing in temperament and exercise, but differing in size, and then the power

of manifestation will be found to bear a uniform proportion to the size of the organ.

Several organs acting in *combination*, assist each other in producing a general result; thus, in playing on a musical instrument, the organ of Time co-operates with the organ of Tune; and the music will be good or bad, in proportion to the perfection of *both* organs in *constitution, size, and exercise*. If Time were small, and Tune large, the music would be greatly inferior to what it would be, if both organs were *full*; that is, neither of them large, but neither of them small. An individual having Benevolence, Veneration, and Conscientiousness all *full*, will manifest the Christian virtues more perfectly and consistently, than if he had Benevolence and Veneration large, and Conscientiousness small; because these virtues are a compound result of all these organs. In these combined actions, each organ contributes a share, corresponding to its constitution, size, and exercise, towards producing the general effect; and if one be very deficient, the quality which it manifests is weakly exhibited, its feebleness not being compensated by the strength of the others.

The term Faculty is used to express a particular power, which the mind (simple in itself) exercises by means of particular organs. It is applied to the feelings as well as to the intellect. Thus, the faculty of Causality means the power of tracing the relation of cause and effect, which the mind manifests by means of the organ of Causality: the faculty of Benevolence means the power of feeling kindly and compassionately, which the mind manifests by means of the organ of Benevolence.

A faculty is admitted to be primitive,

1. Which exists in one class of animals, and not in another;
2. Which varies in the two sexes of the same species;
3. Which is not proportionate to the other faculties of the same individual;
4. Which does not manifest itself simultaneously with the other faculties; that is, which appears and disappears earlier or later in life than other faculties;
5. Which may act or rest singly;
6. Which is propagated in a distinct manner from parents to children; and,
7. Which may singly preserve its proper state of health or disease.

It is not necessary, although advantageous, to become acquainted with the anatomy of the brain, in studying Phrenology. The brain consists of two hemispheres, separated by a strong membrane called the Falciform process of the dura mater. Each hemisphere is an aggregate of parts, and each part serves to manifest a particular mental faculty. The two hemispheres, in general, correspond in form and functions; and hence there are two organs for each faculty, one situated in each hemisphere. The cerebellum in man is situated below the brain. A thick membrane, named the Tentorium, separates the two; but they are both connected with the medulla oblongata, or top of the spinal marrow, and through it with each other. The brain is a web of nervous matter, folded up (the folds being called convolutions), in order to pack as much surface in as small a space as possible. The external surface is of a greyish-brown colour, and is called cineritious, from its resemblance in colour to ashes: the power of mental manifestation is in proportion (*cæteris paribus*) to the extent and thickness of this portion of the brain. The cineritious matter is brought into connection with the spinal marrow (which mani-

ests *sensation* and *motion*) by means of a white fibrous matter called the medullary substance.

Each organ consists of a portion of cineritious substance, lying at the surface, and of white fibres, connecting it with the spinal marrow and with other parts of the brain. Thus, each organ extends from the medulla oblongata, or top of the spinal marrow, corresponding nearly to the hole of the ear, to the surface of the brain or cerebellum; and every individual possesses all the organs in a greater or less degree. No distinct lines of demarcation between the organs have yet been discovered in the brain; but neither have such lines been traced between the column for motion, and that for sensation or feeling, in the spinal marrow, which nevertheless are now generally admitted by physiologists to be distinct. Each organ, when predominantly large, gives to the skull an appearance like that represented in the bust, so that the forms are essentially representations of nature, and not arbitrary. The brain is soft, and when the skull is opened, its own pliability, or the pressure of plaster or other substances applied to it, removes the forms which the organs presented in life. The convolutions, however, differ in their size and appearance, and in the direction in which they lie, so that no good observer acquainted with the anatomy and functions of the brain, could have any difficulty in distinguishing an organ of the propensities or sentiments from an organ of intellect, or *vice versa*, although presented separately.

When the two organs of a faculty lie in parts of the hemispheres which touch each other, they are both included in one delineation (Benevolence and Veneration are examples); but there are two organs to these and all other faculties, except the propensity of Amativeness. To save circumlocution, the expression "*organ*" of a faculty will be frequently used, but both organs are meant.

The size of an organ is estimated by its length and breadth. Its breadth is indicated by its expansion at the surface. The student should observe the *size*, and not the mere *prominence* of the organs.

There are several convolutions, between the hemispheres and at the base of the brain, the functions of which are not ascertained. It has been objected that the mental manifestations which we ascribe to particular organs may proceed from them and the unknown organs acting in combination, and that therefore the functions of no *part* can be ascertained until we know the functions of the *whole* brain. The answer to this is—that each organ uniformly performs its own functions, even when acting along with others. The organ of Tune combined with Veneration, may produce solemn hymns,—and with Alimentiveness, bacchanalian songs; but in either case it produces only music. The direction may be modified in consequence of the organs with which it is combined, but the essential function is never changed.

DIVISION AND CLASSIFICATION.

The mental faculties are divided into two ORDERS,—the AFFECTIVE and INTELLECTUAL faculties: These again are divided into GENERA; the former into two,—the *Propensities* and the *Sentiments*; and the latter into three,—the *External Senses*, and the *Perceptive* and *Reflective Faculties*. This classification, however, is by no means perfect.

ORDER I. FEELINGS.

GENUS I. PROPENSITIES.

The faculties falling under this genus do not form ideas ; their sole function is to produce a propensity of a specific kind. These faculties are common to Man with Animals.

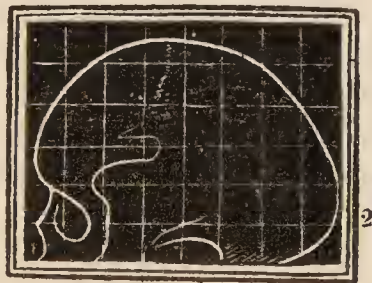
1. AMATIVENESS.

The cerebellum is the *organ* of this propensity. Immediately behind, and a little below, the external opening of the ear, two bony prominences may be felt, called the mastoid processes. The cerebellum lies between them and the projecting point in the middle of the transverse ridge of the occipital bone. The size is indicated during life by the thickness of the neck at these parts ; or by the swelling downwards of the *fossæ* of the occipital bone, which may be felt during life, by pressing the fingers firmly on the top of the neck. The *faculty* gives rise to the sexual feeling. In new-born children, the cerebellum is the least developed of all the cerebral parts. It is to the brain as one to thirteen or fifteen, and in adults as one to six, seven, or eight. It attains its full size from eighteen to twenty-six. It is less in females, in general, than in males. In old age it frequently diminishes. There is no constant proportion betwixt the brain and the cerebellum in all individuals, just as there is no invariable proportion betwixt the feeling and the other powers of the mind. In the casts of Mitchell and Dean it is very large ; and in Dr Hette very small.—This organ and faculty are established.

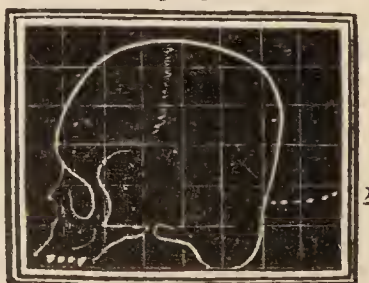
2. PHILOPROGENITIVENESS.

The *organ* is situated above the upper part of the cerebellum, between which and it there is a small space occupied by the membrane called the *tentorium* : The organ corresponds to the protuberance of the occiput. When it is large, and No. 1. moderate, it gives a drooping appearance to the hind part of the head.

Large Philoprogenitiveness.



Small Philoprogenitiveness.



The *faculty* produces the instinctive love of young in general. This feeling is distinct from Benevolence ; for we frequently find it strong in selfish individuals, who manifest no compassionate feeling towards adults. It chiefly supports the mother in her toils, and renders delightful the cares of rearing a helpless offspring. When abused it leads to pampering and spoiling children. The organ is larger in the female in general than in the male. It is large in the Hindoo, Negro, Esquimaux, Ceylonese, and Carib skulls. Dr Vimont has stated some observations which indicate that part of the convolutions now included in Philoprogenitiveness, where it joins Adhesiveness and Combativeness, are distinct organs, giving the tendency to attachment for life.

3. CONCENTRATIVENESS.

The organ is situated immediately above Philoprogenitiveness, and below Self-Esteem.

Observation proves that this is a distinct organ, because it is sometimes found large, when the organs of Philoprogenitiveness and Self-Esteem lying below and above it are small, and sometimes small when these are large. Dr Spurzheim observed it to be large in those animals and persons who seemed attached to particular places; and he hence termed it the organ of *Inhabitiveness*. The function, however, is stated by him as only conjectural. From more enlarged observations, it now seems probable, that its function is to give the desire for permanence in place, and for permanence of emotions and ideas in the mind. Its abuses lead to aversion to move abroad, also to morbid dwelling on internal emotions and ideas, to the neglect of external expressions. It serves to maintain two or more powers in simultaneous and combined activity, so that they may be directed towards one object; and it is, in consequence, named Concentrativeness. Dr Vimont divides this organ into two; and states facts tending to shew that the love of place is manifested by the upper, and Concentrativeness by the lower portion. The organ is small in the American Indians, and larger in Negroes and Europeans.

4. ADHESIVENESS.

This *organ* is situated on each side of Concentrativeness, higher up than Philoprogenitiveness, and just above the lambdoidal suture.

The *faculty* produces the instinctive tendency to attach one's-self to surrounding objects and beings. It disposes to friendship and society in general, and gives ardour to the shake of the hand. In boys it frequently indicates itself by attachment to dogs, horses, rabbits, birds, and other animals. In girls it shews itself by affectionate embraces of the doll. It is stronger, and the organ is larger, in women than in men. When too strong, excessive regret at the loss of a friend, or excessive uneasiness at leaving one's country, or the disease called Nostalgia, is the result. When feeble, indifference to society is the consequence, which may render a man an anchorite or hermit. When abused it leads to clanship and attachment to worthless individuals. The organ is large in Mrs H. and Mary Macinnes.

5. COMBATIVENESS.

The *organ* is situated at the inferior and mastoid angle of the parietal bone.

The *faculty* produces the tendency to oppose, whence proceed active courage, and, when energetic, the propensity to attack. A considerable endowment is indispensable to all courageous and magnanimous characters. It gives that boldness to the mind which enables it to look undaunted on opposition, to meet it tranquilly, and, if possible, to overcome it. When very deficient, the individual cannot resist attacks, and is incapable of making his way where he must invade the prejudices or encounter the hostility of others. When too energetic and abused, it inspires with the love of contention for its own sake; produces a fiery and quarrelsome disposition; and pleasure may then be felt in disputation or in fighting.

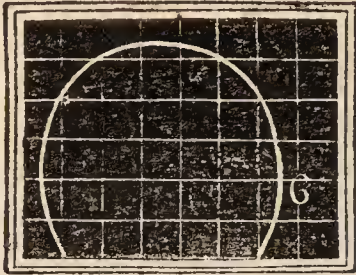
The organ is generally large in persons who have murdered from the impulse of the moment. It is large in the Caribs, King Robert Bruce,

David Haggart, General Wurmser, Maxwell; moderate in Rev. Mr M., and small in most of the Hindoos and Ceylonese.

6. DESTRUCTIVENESS.

This *organ* is situated immediately above, and extends a little backwards and forwards from the external opening of the ear, and corresponds to the squamous plate of the temporal bone.

BELLINGHAM.



Destructiveness large.

HINDOO.



Destructiveness small.

The *faculty* produces the impulse, attended with the desire to injure or destroy in general. The use of it is to injure those who assail us; to kill for food; and to destroy noxious objects and beings. Combative-ness gives the desire to meet and overcome obstacles, and having vanquished them, the mind, under its inspiration, pursues them no farther. Destructiveness prompts us to exterminate them, so that they may never rise up to occasion fresh embarrassment. When energetic, it gives a keen and impatient tone to the mind. Anger and rage are manifestations of it. It is essential to satire; and inspires authors who write cuttingly, with a view to lacerate the feelings of their opponents. When it is very deficient, and Benevolence is large, there is too much softness in the constitution; the mind, as it were, wants temper. The individual feels, and others likewise discover, that his resentment is feeble and impotent, and the wicked set him at defiance, or subject him with impunity to abuse. Cruelty is the result of its excessive energy, uncontrolled by Benevolence and Justice. The organ is conspicuous in the heads of cool and deliberate murderers, and in persons habitually delighting in cruelty. Cursing is the outward expression of its fierce activity, and is another form of its abuse. The organ is very discernible in carnivorous animals. They have more brain above and behind the ear, than herbivorous creatures. The organ is large in the busts of Dean, Mitchell, Pallet, Thurtell, Heaman, and in the skulls of Bruce, Gordon, Hussey, Nisbet, Bellingham, Buchanan, Rotherham, Albert; and small in most of the Hindoos.

ALIMENTIVENESS.

The convolutions lying in the *fossa zygomatica* immediately under *Acquisitiveness*, and before *Destructiveness*, are, on probable evidence, supposed to be the organs of the instinct that prompts us to take nourishment. The organs when large, give breadth across the head at the temples, above and a little behind the cheek-bones. The organ not being established, is only marked with a cross on the bust.

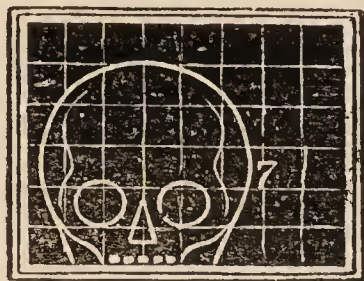
ORGAN OF THE LOVE OF LIFE.

There are great differences among individuals in their love of life, and it is conjectured that a convolution lying at the base of the middle lobe of the brain, towards the mesial line, adjoining to, and inward from, Alimentiveness, is the organ of this instinct; but it is only conjectural.

7. SECRETIVENESS.

The *organ* is situated at the inferior edge of the parietal bones, immediately above Destructiveness, or in the middle of the lateral portion of the brain.

HINDOO.



Secretiveness large.

CEYLONESE.



Secretiveness small.

The *faculty* produces the tendency to restrain within the mind the various emotions and ideas that involuntarily present themselves, until the judgment has approved of giving them utterance. It is an ingredient in prudence. Its abuses are cunning, deceit, duplicity, lying, and, joined with Acquisitiveness, theft. When deficient, the individual is too open, and wants discretion. It enables man and animals, by prudence, slyness, or cunning, to avoid the assaults of enemies, when they are unable to repel them by force. In writing, it leads to irony, and, combined with the faculty of Wit, gives a talent for humour. It assists the actor. The organ is large in Bruce, La Fontaine, and Clara Fisher; also in American Indians, Cunning Debtor, David Haggart, Hindoos, Peruvians; moderate in skull with organs marked.

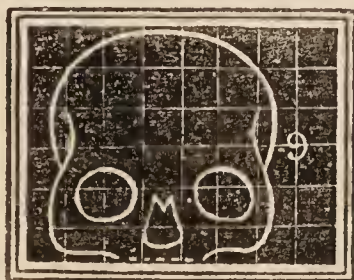
8. ACQUISITIVENESS.

The organ is situated at the anterior inferior angle of the parietal bone. Dr Spurzheim called it Covetousness; Sir G. S. Mackenzie suggested the more appropriate name of Acquisitiveness.

The faculty produces the tendency to acquire, and the desire to possess in general, without reference to the uses to which the objects, when attained, may be applied. The idea of property is founded on it. It takes its direction from other faculties, and hence may lead to collecting coins, paintings, minerals, and other objects of curiosity or science, as well as money. Idiots, under its influence, are known to collect things of no intrinsic value. A person in whom it is predominant, desires to acquire for the pleasure attending the mere act of acquisition. He in whom it is small is little disposed to collect any thing. The abuses of it are inordinate desire for property, selfishness, and avarice. The organ is large in Heaman; full in Rev. Mr M.; and moderate in King Robert Bruce.

9. CONSTRUCTIVENESS.

The *organ* is situated a little upward and backward from the outer angle of the eye.



Constructiveness large.



Constructiveness small.

The *faculty* produces the tendency to fashion or construct in general. It aids the architect, and all who combine materials into works of art. It takes its direction from the other faculties. When combined with *Combateness* and *Destructiveness*, it will give a desire to construct implements of war ;—with predominant *Veneration*, to erect places of religious worship ;—with *Tune* and *Time*, to construct musical instruments. The organ is large in all the lower animals which build. It is large in Brunel, Haydon, Herschel, and in all who have excelled in constructive talent. It is large in the ancient Greek skulls, and small in the New Hollanders. The talent for engineering does not belong to it, but to Weight.

GENUS II.—SENTIMENTS.

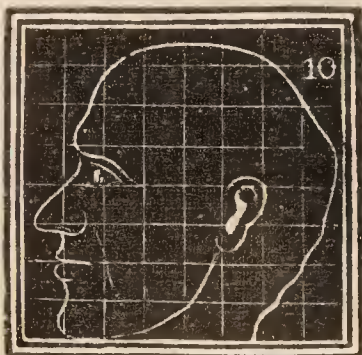
These faculties, like those which we have already considered, do not form specific ideas, but produce merely a SENTIMENT ; that is, a propensity, joined with an emotion or feeling of a certain kind. Several of them, viz. SELF-ESTEEM, LOVE OF APPROBATION, CAUTIOUSNESS, and BENEVOLENCE, are common to man with the lower animals ; all the others are peculiar to man.

I. *Sentiments common to Man and the lower Animals.*

10. SELF-ESTEEM.

The *organ* is situated at the vertex or top of the head, a little above the posterior or sagittal angle of the parietal bones.

FRANCOIS CORDONNIER.



Self-Esteem moderate.

MR. ———



Self-Esteem large.

The *faculty* produces the sentiment of Self-Esteem or Self-love in general. It inspires the mind with confidence in its own powers ; and, when combined with the superior sentiments and intellect, gives dignity to the character. When deficient, it produces a want of confidence in one's self, and may lead to an excess of humility. When abused, it produces pride, disdain, conceit, selfishness, arrogance, egotism, or the love of power. Combined with large Destructiveness, and deficient Benevolence and Conscientiousness, it gives rise to envy. The organ is large in Haggart, the Hindoos, Dempsey ; moderate in Dr Hette, and the American Indians.

11. LOVE OF APPROBATION.

The *organ* is situated on each side of that Self-Esteem, and above Adhesiveness.

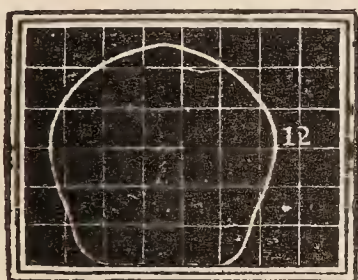
The *faculty* produces the love of the esteem and admiration of others, expressed in praise or approbation. A due endowment of it is indispen-

sable to an amiable character. It induces its possessor to make active exertions to please others, and also to suppress numberless little manifestations of selfishness, and to restrain many peculiarities of temper and disposition, from the dread of incurring their disapprobation. The direction in which gratification of it is sought, depends on the other faculties with which it is combined in the individual. If the moral sentiments and intellect be vigorous, it will desire an honourable fame, and hence it animates and excites the poet, painter, orator, warrior, and statesman. If the lower propensities predominate, the individual may be pleased by the reputation of being the best fighter, or the greatest drinker, of his circle. The abuses of it are vanity, a fidgety anxiety about what others will think of us, false ambition, and love of praise independently of praiseworthiness. When deficient, indifference to the opinion of others is the consequence. The organ is large in Bruce, Dr Hette, American Indians, Clara Fisher ; deficient in D. Haggart and Dempsey.

12. CAUTIOUSNESS.

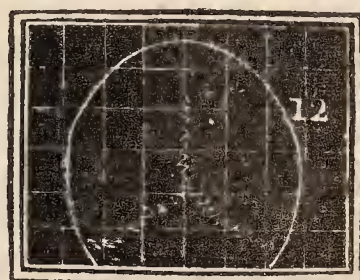
The *organ* is situated near the middle of each parietal bone, where the ossification of the bone generally commences.

HINDOO.



Cautiousness large.

FRENCH SKULL.



Cautiousness small.

The *faculty* produces the emotion of fear in general. It leads the individual in whom it is strong to hesitate before he acts, and, from apprehending danger, to take precautions, that he may be assured of his safety. It is an element in a prudent character. When too powerful, it produces doubts, irresolution, and wavering. When deficient, the individual is not apprehensive about the results of his conduct, and often proceeds to act without mature deliberation. The involuntary activity, from internal causes, of this organ, in those in whom it is too powerful, produces sensations of dread and apprehension, gloomy despondency, or even despair, without an adequate external cause. A great and involuntary activity of it occasions a *panic*, a state in which the mind is hurried away by an irresistible emotion of fear, disproportioned to the outward occasion. The organs are generally largely developed in children. It is an element in a bashful character, and produces the timidity essential to it. When combined with large Combativeness, it gives rise to a valiant but prudent character. The organ is large in Bruce, Hette, the Mummies, Peruvians, and Hindoos ; moderate in Bellingham, Mary Macinnes, and Negroes.

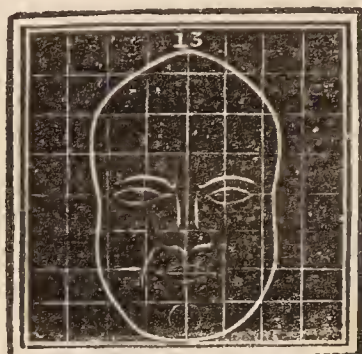
13. BENEVOLENCE.

The *organ* is situated at the upper part of the frontal bone, in the coronal region, and immediately before the fontanel.

The *faculty* produces the desire of the happiness of others, and disposes to compassion and active benevolence. It communicates mildness

to the temper, and disposes the possessor to view charitably the actions and character of others. A small development of the organ does not produce cruelty as its proper function, but only indifference to the welfare of others ; when, however, Destructiveness is large, and this organ is small, cruelty may result from the uncontrolled activity and abuse of the former. The lower animals possess this organ, but the faculty in them

JACOB JERVIS.



Benevolence large.

CARIB.



Benevolence small.

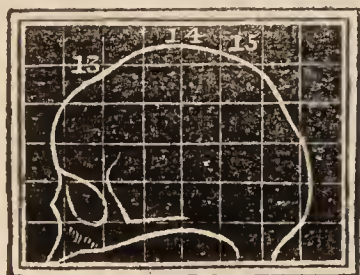
seems to be limited, in a great degree, to the production of passive mildness of disposition. Dogs, horses, monkeys, &c. which have the corresponding part of the forehead large and elevated, are mild and pacific ; those, on the other hand, in which it is small and depressed, are ill-natured. It is depressed in all the ferocious tribes of animals, and also in nations remarkable for cruelty, as the Caribs, &c. The ancients make the top of the forehead much higher in Seneca than in Nero. When abused, it leads to profusion, injurious indulgence of the appetites and fancies of others, prodigality, facility of temper. The organ is large in Jacob Jervis, the Negro Eustache, Henry Quatre, Hette ; very small in Bellingham, Griffiths, and the Caribs ; moderate in Bruce and Gordon.

II. *Sentiments proper to Man.*

14. VENERATION.

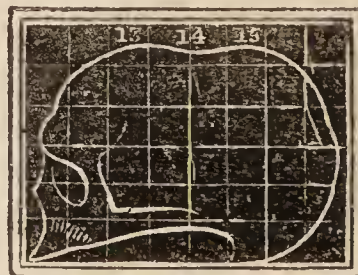
The *organ* is situated at the middle of the coronal region of the brain, at the bregma or fontanel of anatomists.

Skull in Dr GALL's Collection.



Veneration large, Benevolence and Firmness deficient.

Dr HETTE.



Benevolence and Firmness large, and Veneration deficient.

The *faculty* produces the sentiment of respect and reverence ; and, when directed to the Supreme Being, adoration. It is the source also of the tendency to look up to and admire superiors in rank and power ; and, in this way, disposes to obedience. It is also the chief element in filial piety. When the organ is large, and that of Self-Esteem small, humility is the result. A deficiency of it does not produce profanity, as a positive manifestation ; it only renders the mind little sensible to the respectful

and reverential feelings before described. When too energetic, and not enlightened by intellect, it produces abuses, or superstitious respect for objects and opinions which have nothing but their antiquity to recommend them; it then renders its possessor prone to venerate every ancient absurdity, as "the wisdom of our ancestors." When very energetic, it may lead to religious enthusiasm, which may ultimately terminate in insanity. The organ is large in the Negroes, Bruce, Martin; small in Dr Hette.

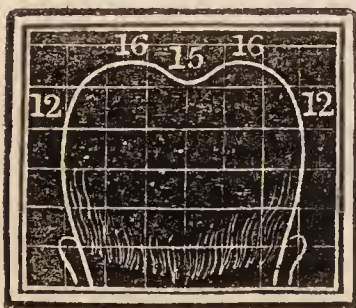
15. FIRMNESS.

The *organ* is situated at the posterior part of the coronal region of the head, close upon the middle line. It is represented in the figures given under "Conscientiousness." It produces determination, constancy, and perseverance. Fortitude, as distinguished from active courage, results from it. When powerful, it gives a fixed, forcible, and emphatic manner to the gait, and a corresponding tone to the voice. It gives, however, perseverance only in manifesting the faculties which are possessed by the individual in adequate strength. A person with great Firmness, and much Tune, may persevere in making music: diminish Tune, so as to render him insensible to melody, and he will not persevere in that attempt; but if he have great Causality, he may be constant in abstract study. When too energetic, and not well directed, it produces obstinacy, stubbornness, and infatuation. When weak, the individual is prone to yield to the impulses of his predominating feelings. The organ is large in Bruce, Haggart, American Indians; small in Mrs H.

16. CONSCIENTIOUSNESS.

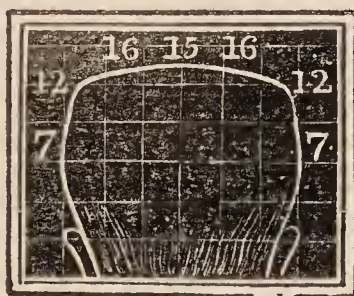
The *organ* is situated on the posterior and lateral parts of the coronal region of the brain, upwards from Cautiousness, and backwards from Hope.

Mrs H.



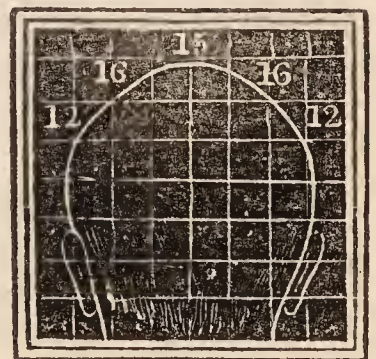
Firmness small, Conscientiousness large.

Boy addicted to falsehood.



Firmness and Conscientiousness deficient.

DAVID HAGGART.



Firmness large, Conscientiousness deficient.

In Mrs H., Firmness 15 is small, and Conscientiousness 16 large; in D. Haggart, Firmness 15 is large, and Conscientiousness 16 deficient; and in the Boy, both of these organs are deficient, which is indicated by the head rising very little above 12 Cautiousness. If in Mrs H. Firmness had been as large as Conscientiousness, or in Haggart Conscientiousness had been as large as Firmness, the heads would have presented a full and elevated segment of a circle passing from Cautiousness to Cautiousness, the very opposite of the flat and low line in the head of the Boy. It is of great importance in practice to attend to these different forms.

The *faculty* produces the feeling of duty, obligation, incumbency, right and wrong, for which we have no single definite expression in the

English language. Justice is the result of this sentiment, acting in combination with the intellectual powers. A large endowment of it is of the highest importance in regulating the conduct. The individual is then disposed to act justly from the love of justice; he is delighted with the observance of right, and disgusted with the doing of wrong: he is inclined to form equitable judgments of the motives and conduct of others; is scrupulous, and, when deserving of censure, is as ready to condemn himself as his neighbour. When the organ, on the other hand, is small, the power of experiencing the sentiment is feeble, and the individual, in consequence, is more prone to do an unprincipled action, if tempted by interest or inclination. He experiences a difficulty both in perceiving the quality of justice itself, and in feeling the imperious obligations of duty, arising from its dictates. The organ is large in Hette, and Mrs H.; small in Bruce, Haggart, Bellingham, and in the skulls of most of the savage tribes.

17. HOPE.

The *organ* is situated on each side of that of Veneration, and extends under part of the frontal and part of the parietal bones.

The *faculty* produces the sentiment of Hope in general, or the tendency to believe in the possibility of what the other faculties desire, but without giving the conviction of it, which depends on Reflection. It inspires with gay, fascinating, and delightful emotions, painting futurity fair and smiling as the regions of primeval bliss. When too energetic and predominant, it disposes to credulity, and, in mercantile men, leads to rash and inconsiderate speculation. When the organ is very deficient, and that of Cautiousness large, a gloomy despondency is apt to invade the mind.

In Religion, this faculty favours the exercise of Faith; and by producing the natural tendency to look forward to futurity with expectation, disposes to belief in a life to come. Every faculty desires, but each does not produce hope; nay, desire is sometimes strong, when hope is feeble or extinct; a criminal on the scaffold may strongly desire to live, when he has no hope of escaping death.

18. WONDER.

The *organ* is situated above Ideality, and before Hope. See *Figure* under *Ideality*.

The *faculty* produces the sentiment of wonder, surprise, or astonishment, and gives the love of the new and the strange. When very large there is an appetite for marvellous events, objects, and occurrences, and a tendency to believe in the supernatural. When the organ is very large and internally active, the individual is liable to mistake its impressions for inspirations, or communications from supernatural beings. He sees visions, and believes in apparitions. When very deficient, little interest is felt in the new, the marvellous, or the astonishing, and the individual desires to try every thing by the standard of reason, experience, or common sense. It is an element in *Admiration*.

19. IDEALITY.

The *organ* is situated nearly along the lower edge of the temporal ridge of the frontal bone. It and the organ of Wonder are both large in TASSO.



The *faculty* produces the love of the beautiful and perfect, and delights in the "beau ideal." It tends to elevate and endow with splendid excellence every object conceived by the mind; and stimulates the other faculties to create scenes and objects invested with the qualities which it delights to contemplate. It inspires with enthusiasm for the beautiful, and prompts to embellishment and splendid conceptions. It is essential to the poet, painter, sculptor, and all who cultivate the fine arts. A good endowment of it elevates and expands the aspirations of the other feelings and conceptions, directs them to higher objects than those which would be sufficient to gratify themselves, and thus gives a constant tendency to refinement. A great deficiency of it leaves the mind in a state of homeliness, varying its appearances according to the other faculties which predominate in the individual. The organ is larger in civilized than in savage nations; in the European for example, than in the Negro, American Indian, and New Hollander. The poetry of Milton, Shakespeare, and Byron, abounds with its influence; that of Crabbe has less; and it is scarcely distinguishable in the verses of Dean Swift. The organ is large in Voltaire, Wordsworth, Chalmers, Wilkie, Burke, Haydon, Henri Quatre, Francois Cordonnier; small in New Hollanders, Mr Hume, Bellingham, Haggart, Gordon. The part marked ? is unascertained. Several facts indicate that it is the organ of the Sublime.

20. WIT.

The *organ* is situated at the side of the upper part of the forehead, between *Causality* and *Ideality*.

The *faculty* produces the sentiment of the ludicrous, and gives the tendency to view objects in that light. It is the predominant feature in the writings of Sterne, Swift, Voltaire, Rabelais, Cervantes, and Boileau. It produces *Satire*, when combined with *Destructiveness*; and *Humour*, when combined with *Secretiveness*. In humour, Wit produces the ludicrous colouring, and *Secretiveness* the slyness. The organ of Wit is large in Sterne, Voltaire, Henri Quatre; and moderate in Sir J. E. Smith, Mr Hume, Hindoos.

21. IMITATION.

The *organ* is situated on the two sides of Benevolence.

JACOB JERVIS.



CLARA FISHER.



In both of these figures the head rises to a great height above the eyes; but in Jervis it slopes rapidly on the two sides of 13, Benevolence, indicating Imitation deficient; whereas in Miss Clara Fisher it is as high at 21, Imitation, as at Benevolence, indicating both organs to be large.

The *faculty* gives the talent for Imitation in general. It contributes to render a poet or author dramatic. It is essential to an actor. *Secretiveness* also is necessary to an actor, to enable him to conceal his own character ; while, by means of Imitation, he assumes that of the individual whom he personifies. It aids the portrait-painter, sculptor, and engraver ; and it gives the tendency, in speech and conversation, to suit the action to the words. It is generally active and the organ large in children. When the organ is deficient, the individual is destitute of flexibility of manner ; he presents habitually the air of his predominant dispositions. Imitation does not supply the place of other faculties. A person with large Imitation, and deficient Tune, could not imitate Catalani or Braham in singing. It enables its possessor to employ his other faculties, only in so far as he possesses them, in imitation.

ORDER II. INTELLECTUAL FACULTIES.

These faculties communicate to men and animals knowledge of their own internal sensations, and also of the external world ; and their function is to know objects that exist, and their qualities and relations. They consist of three genera : the first genus includes the Five Senses ; the second, those powers which take cognizance of external objects, named Knowing or Perceptive Faculties ; and the third, the faculties which trace abstract relations, and reason or reflect, named the Reflective Faculties.

GENUS I. EXTERNAL SENSES.

By means of the Five Senses, man and animals are brought into communication with the external world.

Each sense has two organs, but a single impression is received by the mind from affections of them. The senses are, 1st, FEELING or TOUCH ; 2d, TASTE ; 3d, SMELL ; 4th, HEARING ; 5th, SIGHT ; and Mr Simpson conceives that there is evidence of a 6th sense, that of Force or Resistance, of which the whole muscular frame is the external organ. See *Phrenological Journal*, vol. ix. p. 193.

GENUS II. KNOWING FACULTIES, OR FACULTIES WHICH TAKE COGNIZANCE OF THE EXISTENCE, QUALITIES, AND RELATIONS OF EXTERNAL OBJECTS.

22. INDIVIDUALITY.

The *organ* is situated in the middle of the lower part of the forehead.

KING GEORGE III.



Individuality, 22, large ;
and Form, 23, large.

J. P. CURRAN.



Individuality, 22, moderate :
Form small.

The *faculty* gives the desire, accompanied with the ability, to know objects as mere existences. Their qualities, modes of action, and effects, are taken cognizance of by other faculties. It prompts to observation, and is a great element in a genius for those sciences which consist in a knowledge of specific existences, such as natural history, botany, mineralogy, and anatomy. It forms the class of ideas designated by nouns substantive. When deficient, the power of observation is feeble.

23. FORM.

The size of this organ is indicated by the width between the eyes, the different degrees of which are caused by the greater or less development of the convolutions of the brain situated on the mesial or inner side of the orbitary plates of the frontal bone, on each side of the *crista galli*.

The function of the *faculty* is to judge of Form. It aids the mineralogist, portrait-painter, and all persons engaged in the imitative arts. It gives the power of distinguishing faces. Dr Spurzheim mentions, that it is large in the Chinese whom he had seen in London, and also in the French. Children, in whom this organ, together with those of Constructiveness, Secretiveness, and Imitation, are large, frequently draw, cut, or scratch, the figures of men and animals for their amusement. Large in King George III., and in the Chinese skulls ; and small in Curran. See *Cuts*, p. 18.

24. SIZE.

The *organ* is situated at the inner and upper angle of the eyebrow.

The *faculty* gives the power of judging of the dimensions of space, or size ; and also of distance. It gives a talent for perspective, and, along with Locality, is essential to the landscape-painter. Some officers in the army, in forming their companies into line, estimate the space which the men will occupy with perfect accuracy, and others can never learn to judge correctly of this requisite ;—the organ has been observed largely developed in the former. It is important to geometricians. As the frontal sinus throws a difficulty in the way of observing this organ, the negative evidence, that is, the invariable deficiency of the mental power, when the skull during life indicates a depression of the organ, is chiefly to be relied on. Large in Brunel, Williams, Douglas ; small in Ferguson.

25. WEIGHT or FORCE.

The *organ* is situated near the inner and upper angle of the eyebrow, a little outward from the nose.

The *faculty* takes cognizance of force, and estimates the degrees of it. It enables the turner, the archer, and also the player at billiards and quoits, to adjust the degree of force which they exert to the degree of resistance to be overcome ; and a large endowment of it contributes greatly to their success. It is essential to engineers, who require to regulate momentum and resistance in mechanics. It enables man and animals to adapt their movements to the laws of gravitation. It and Size are large in expert marksmen. When deficient, the power is feebly possessed. The frontal sinus, when large, extends to this organ. The organ is large in Brunel, Sir Isaac Newton, and M'Lachlan.

26. COLOURING.

The *organ* is situated at the middle of the arch of the eyebrow. When

large, it causes it to project forward ; and sometimes gives an arched appearance to the middle of the eyebrow.

The *faculty* gives the perception of colours, their shades, harmony and discord ; but the reflecting faculties adapt them to the purposes of painting. It is generally more powerful in women than in men : and, accordingly, some women, as *colourists*, have equalled the masters among men, while, as *painters*, women in general have always been inferior to the other sex. A great endowment of this faculty renders the sight of flowers and enamelled meadows pleasing. It aids the flower-painter, enameller, dyer, and, in general, all who occupy themselves with colours. Its great energy gives a passion for colours, but not necessarily a delicate taste in them. Taste depends upon a well regulated rather than a very powerful activity of the faculties. There are individuals whose perception of form is good, but who are insensible to different hues and shades of colour ; Mr James Milne, whose mask is sold, is an example ; and such persons are uniformly deficient in the organ of Colouring. Sometimes colours are very accurately judged of, although the eyesight be not vigorous. In the portraits of Rubens, Rembrandt, Titian, Salvator Rosa, and Claude Lorraine, it gives an arched appearance to the eyebrow. In the masks of the late Sir Henry Raeburn, of Wilkie, and Haydon, the eyebrow projects at this organ.

27. LOCALITY.

The *organ* is situated a little above the inner termination of the eyelashes, on each side of Individuality.

The *faculty* takes cognizance of direction in space, and of the position of objects. It conduces to the desire of travelling, and constitutes a chief element in the talents for topography, geography, astronomy, descriptive writing, and landscape-painting. It gives what is called “*coup d’œil*,” and judgment of the capabilities of ground. It is necessary to chess-players, and to the military draughtsman ; and is of great importance to a general in war. The organ is large in the heads of astronomers, as Kepler, Galileo, Newton, Tycho Brahe, Descartes ; and also of landscape painters ; and travellers, as Mungo Park and Captain Cook. The frontal sinus occasionally obscures its real dimensions.

28. NUMBER.

The *organ* is situated behind and a little above the exterior angle of the eye. When it is large, the arch of the eyebrow at the outer edge is either much bent downward, or there is an elevation behind the external angle of the orbit.

The special function of the *faculty* is to give the conception of number and its relations ; or the talent for calculation in general. Arithmetic, algebra, and logarithms belong to it ;—but the other branches of mathematics, as geometry, are not the simple results of this faculty. They depend on Individuality, Form, Size, Locality, and Comparison. The organ appears large in the portraits of Euler, Kepler, Napier, Gassendi, La Place, &c. ; and in Jedediah Buxton, who possessed the faculty in a surprising degree, it is very large. It is large in Bidder, Humboldt, Colburn ; small in French M.D.

29. ORDER.

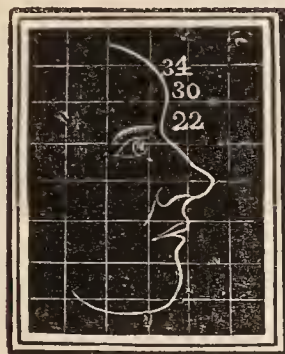
The *organ* lies above the outer angle of the orbit of the eye, between *Number* and *Colouring*.

The *faculty* gives the perception and love of symmetry, or order, in the arrangement of physical objects. There are individuals who are martyrs to the love of order, who are distressed beyond measure by the sight of confusion, and highly satisfied when every thing is well arranged. These persons have the organ in question large. The sort of arrangement, however, imposed by this faculty, is different from, although perhaps one element in, that philosophical method which is the result of the reflective faculties. When the organ is deficient, the individual is blind to the beauty of order, and lives contentedly in the midst of the greatest confusion. The organ is large in the masks named "French M. D.," and "order large," and in Humboldt, the brother of the traveller; and small in Anne Ormerod.

30. EVENTUALITY.

The *organ* is situated exactly in the middle of the forehead, above the nose.

PITT



MOORE.



SHERIDAN.



22. Individuality moderate.
30. Eventuality large.
34. Comparison rather large.

22. Individuality large.
30. Eventuality small.
34. Comparison very large.

22. Individuality large.
30. Eventuality large.
34. Comparison full.

The *faculty* takes cognizance of all phenomena, or of motion, action, and events. It is the source of verbs, as Individuality is of substantives. It observes occurrences, and prompts to the use of experiments to gain knowledge. A horse at rest is an object of Individuality; while a horse in motion is an object of Eventuality. It gives a talent for observation of changes, and is an element in a talent for narration. It takes cognizance of history, and is useful in practical affairs. The organ is large in Pitt, Sir Walter Scott, and in the reputed masks of Dean Swift.

31. TIME.

The *organ* is situated on each side of Eventuality. The *faculty* gives the power of judging of time, and of intervals in general. By giving the perception of measured cadence, it appears to be one source of pleasure in dancing. It is essential to music and versification.

32. TUNE.

The *organ* is situated above the external angle of the orbit of the eye, as high as the middle of the forehead, on each side of the temporal ridge. Sometimes the temporal muscle covers part of it, and leads to an over estimate of its size. This error may be guarded against by pressing the part, and causing the individual to move strongly the lower jaw.

The organ of Tune bears the same relation to the ears, as the organ of Colour does to the eyes. The ear receives the impressions of sounds,

and is agreeably or disagreeably affected by them ; but the ear has no recollection of tones, nor does it judge of their relations ; it does not perceive the harmonies of sound ; and sounds, as well as colours, may be separately pleasing, though disagreeable in combination.

The *faculty* gives the perception of melody ; but this is only one ingredient in a genius for music. Time is requisite to give a just perception of intervals ; Ideality, to give elevation and refinement ; Secretiveness and

HANDEL.



Tune large.

ANN ORMEROD.



Tune very small.

Imitation to produce expression ; and Constructiveness, Form, Weight, and Individuality, to supply the mechanical expertness, necessary to successful performance. This combination occurs in Kalkbrenner, Talberg, and other eminent composers and performers. In Glück and others, this organ had a pyramidal form ; in Mozart, Viotti, Zumsteg, Dussek, Crescentini, and others, the external corners of the forehead are enlarged, but rounded. Great practice is necessary to be able to observe this organ successfully.

33. LANGUAGE.

The *organ* lies on the back part of the bone that forms the roof of the eye. A large development of it is indicated by the prominence and depression of the eyes. If the fibres be long, they push the eyes forward ; if they are only thick, they push them towards the outer angle of the orbit and downwards. The organ of Form produces chiefly *distance between* the eyes ; without rendering them prominent.

The *faculty* enables us to acquire a knowledge of, and gives us the power of using, artificial signs or words. Persons who have a great endowment of it abound in words. In ordinary conversation their language flows like a copious stream ;—in a speech they pour out torrents. When this organ is large, and those of reflection small, the style of writing or speaking will be verbose and cumbersome ; and when this difference is very great, the individual, in ordinary conversation, is prone to repeat, to the inconceivable annoyance of the hearer, the plainest sentences again and again, as if the matter were of such difficult apprehension, that one telling was not sufficient to convey the meaning. When the organ is very small, there is a want of command of expression, a painful repetition of the same words, and a consequent poverty of style both in writing and speaking.

The signification of words is learned by other faculties : For example, this faculty may enable us to learn and remember the word Melody ; but if we do not possess the faculty of Tune, we can never appreciate the meaning attached to that word by those who possess that faculty in a high degree. The power of learning foreign languages depends on this organ, combined with Imitation, Individuality, Eventuality, and Comparison.—

Large in companion of Gall, Sir J. E. Smith, Humboldt, Voltaire ; small in Fraser.

FUNCTIONS OF INDIVIDUALITY AND EVENTUALITY DISTINGUISHED FROM THOSE OF THE OTHER KNOWING FACULTIES.

In the preceding pages it is stated, that the faculty of Form perceives the forms of objects ;—Colouring their colour ;—Size their dimensions ;—and that Individuality takes cognizance of existences, and Eventuality of events in general. The question naturally occurs, If the minor knowing powers apprehend *all* the separate qualities of external objects, what purpose does Individuality serve in the mental economy ? Its function is to form a single intellectual conception out of the different items of information communicated by the other knowing faculties. In perceiving a tree, the object apprehended by the mind is not colour, form, and size, as separate qualities ; but a *single thing* or *being*, named a tree. The function of Individuality, therefore, is to embody the separate elements furnished by the other knowing faculties into one, and to produce out of them conceptions of aggregate objects as a whole : which objects are afterwards viewed by the mind as individual existences, and are remembered and spoken of as such, without thinking of their constituent parts. We have no knowledge of the substance of objects apart from their qualities, yet we have a conviction of their substantive existence. This is given by Individuality. Children early use and understand abstract terms, such as tree, man, ship ; and the organ of Individuality is generally well developed in them.

Farther, Form, Colour, and Size, furnish certain elementary conceptions which Individuality unites and conceives as the being called a Man. The faculty of Number called into action gives the idea of plurality ; that of Order furnishes the idea of regular arrangement. Now, Individuality, receiving the intimations of all these separate faculties, *combines* them again, and contemplates the *combination* as an *individual object*, and this is an *army*. After the idea of an army is thus formed, the mind drops the recollection of the constituent parts, and afterwards thinks of the *aggregate only*, or of the combined conception formed by Individuality ; and regards it as a single object. Eventuality is surrounded by the organs of Individuality, Locality, Comparison, and Causality, and forms individual conceptions from their combined intimations. A revolution, for instance, is not a substance or being existing in nature, but is the result of the combined action of a number of moral and physical causes, which Eventuality conceives as one event.

GENUS III.—REFLECTING FACULTIES.

The intellectual faculties which we have considered, give a knowledge of objects, their qualities and relations, and also of events ; those to which we now proceed produce ideas of relation or reflect. They minister to the direction and gratification of all the other powers, and constitute what we call Reason or Reflection.

34. COMPARISON.

The *organ* is situated in the middle of the upper part of the forehead. The *faculty* gives the power of perceiving resemblances, analogies, and

differences. Tune may compare different notes ; Colour contrast different hues ; but Comparison may compare a Colour and a Note with a feeling (selecting, for example, black drapery and solemn music as accompaniments of grief), which these other faculties by themselves could not accomplish. This faculty prompts to reasoning, but not in the line of necessary consequence. It explains one thing by comparing it with another. It gives “ingenuity in discovering unexpected glimpses and superficial coincidences in the ordinary relations of life,” and great power of illustration. It enables the mathematician to perceive the truth of a proposition which is necessarily implied in another which he knows to be demonstrable. It is the largest organ in the forehead of the late Right Honourable William Pitt. It is large also in Dr Chalmers, Roscoe, and Burke. In popular preachers it is generally fully developed. It is more rarely deficient than any other intellectual organ ; and the Scripture is addressed to it in a remarkable degree, being full of analogies and comparisons.

35. CAUSALITY.

The *organ* is situated on the upper part of the forehead, on each side of Comparison,

The *faculty* perceives the dependencies of phenomena, and it furnishes the idea of causation, as implying something more than mere juxtaposition or sequence. It impresses us with an irresistible conviction, that every phenomenon or change in nature has a cause, and hence, by successive steps, leads us to the First Cause of all. In looking to the actions of men, it prompts us to consider the motives, or moving causes, from which they proceed. It induces us to ask, Why is this so ? It gives penetration, and the perception of logical consequences in argument. It is large in persons who possess a natural genius for metaphysics, political economy, or similar sciences. A great defect of the organ renders the intellect superficial ; and unfits the individual for forming comprehensive and consecutive views, either in abstract science or in business. Coincidence only, and not Causation, is then perceived in events. The organ appears largely developed in the portraits and busts of Bacon, Locke, Franklin, Kant, Voltaire, Playfair, Dr Thomas Brown ; and in the masks of Haydon, Burke, Brunel, Wilkie ; moderate in Pitt and Sir J. E. Smith ; and very deficient in the Caribs and New Hollanders. It is larger in the Germans, Scotch, and English in general than in the French.

MODES OF ACTIVITY OF THE FACULTIES.

All the faculties, when active in a due degree, produce actions good—proper—or necessary. Excess of activity and improper direction produce abuses. The smallness of a particular organ is not the cause of its producing abuses. Thus, though the organ of Benevolence be small, this does not produce cruelty. It will be accompanied with indifference to the miseries of others. It may lead to the omission of duties. When one organ is small, abuses may result from another being left without proper direction and restraint. Thus, large Acquisitiveness and Secretiveness, combined with small Conscientiousness, and deficient reflecting faculties, may produce theft. Large Destructiveness, with small Benevolence, may produce cruel and ferocious actions.

Every faculty when in action, from whatever cause, produces the kind

of feeling, or forms the kind of ideas, already explained as resulting from its natural constitution.

The PROPENSITIES and SENTIMENTS cannot be excited to activity by a mere act of the will. We cannot conjure up the emotions of Fear, Compassion, or Veneration, by merely willing to experience them. These faculties, however, may enter into action from internal excitement of the organs; and then the desire or emotion which each produces is experienced, whether we will to experience it or not. We have it in our power to permit or restrain the manifestation of them in the action; but we have no option, if the organ be excited, to experience or not to experience, the feeling itself. There are times when we feel involuntary emotions of fear, or hope, or awe, arising in us, for which we cannot account; and such feelings depend on the internal activity of the organs of these sentiments.

In the *second* place, these faculties may be called into action independently of the will, by the presentment of the external objects fitted by nature to excite them. When an object in distress is presented, the faculty of Benevolence starts into activity, and produces the feelings which depend upon it. In these cases, the power of acting or of not acting, is dependent on the will; but the power of feeling, or of not feeling, is not so.

In the *third* place, the faculties of which we are now speaking, may be excited to activity, or repressed, *indirectly*, by an effort of the will. Thus, the knowing and reflecting faculties have the function of forming ideas. If these faculties be employed to conceive internally the objects fitted by nature to excite the propensities and sentiments, the latter will start into activity in the same manner, but not in so powerful a degree, as if their appropriate objects were externally present. The vivacity of the feeling, in such cases, will be in proportion to the strength of the conception, and the energy of the propensities and sentiments together. If we conceive inwardly an object in distress, and Benevolence be powerful, compassion will be felt, and tears will sometimes flow from the emotion produced. Hence he who has any propensity or sentiment predominantly active from internal excitement, will have his intellect frequently filled with conceptions fitted to gratify it.

These faculties have not the attributes of Perception, Conception, Memory, Imagination: They have the attribute of Sensation alone; that is to say, when they are active, a sensation or emotion is experienced. Hence Sensation is an accompaniment of the activity of all the faculties which feel, and of the nervous system in general; but sensation is no faculty in itself.

The laws of the KNOWING and REFLECTING faculties are different: These faculties form Ideas, and perceive Relations; they constitute Will; and they minister to the gratification of the other faculties which only feel.

1st, These faculties, as well as the former, may be active from internal causes, and then the kinds of ideas which they are fitted to form, are presented involuntarily to the mind. The musician feels the notes flowing on him uncalled for. A man in whom Number is powerful and active, calculates by a natural impulse.

2dly, These faculties may be excited by the presentment of the external objects fitted to call them into activity; and,

3dly, They may be excited to activity by an impulse from the propensities or sentiments.

When excited by the presentment of external objects, the objects are perceived, and this act is called PERCEPTION. Perception is not a separate power, but results from the lowest degree of activity of these faculties; and, if no idea is formed when the object is presented, the individual is destitute of the power of manifesting the faculty whose function is to perceive objects of that kind. Thus, when tones are produced, he who cannot perceive the melody of them, is destitute of the power of manifesting the faculty of Tune. Each of them performs Perception in its own sphere.

When these faculties are excited by an act of the Will, the ideas which they had previously formed are recalled: This act is named MEMORY, which results from the *activity* of each of these faculties; but it is no faculty itself. Tune remembers music; Individuality, facts; and so on. Time acting along with any of these faculties gives the impression of the *previous existence* of the ideas recalled, which impression distinguishes Memory from Conception or Imagination.

When these faculties are powerfully active, from internal excitement, the ideas they have previously formed are vividly and rapidly conceived, and the act of forming them, when not associated with the impression of past time, is styled CONCEPTION or IMAGINATION. Each executes Conception in its own sphere. When conceptions of absent external objects become vivid and permanent, through disease of the organs, the individual believes in the actual presence of the objects, and is deluded by phantoms or visions. This is the explanation of the cases cited in Dr Hibbert's work on Apparitions. Great size or disease of the organ of Wonder contributes especially to this effect.

And, lastly, JUDGMENT, in the philosophical sense, belongs to the reflecting faculties alone. The knowing faculties may be said, in one sense, to judge; as, for example, the faculty of Tune may be agreeably or disagreeably affected, and, in this way, may be said to judge of sounds; but judgment, in the proper sense of the word, is a perception of relation or of fitness, or of the connection between means and an end, and it belongs to the reflecting faculties. These faculties have perception, memory, and imagination also. He who possesses them powerfully, perceives and conceives, remembers and imagines, processes of deduction, or ideas of abstract relations, with great facility.

PRACTICAL JUDGMENT in the affairs of life depends on a harmonious combination of *all* the organs, particularly of the propensities and sentiments, in just proportions. In order to act rightly, it is as necessary to feel correctly as to reason deeply.

ATTENTION is not a faculty of the mind, but merely consists in a vivid application of the faculties which form ideas. Unless an organ be adequately possessed, the objects of which it takes cognizance cannot be attended to by an effort of the will. The intellectual powers are greatly assisted in producing attention by Concentrativeness and Firmness.

ASSOCIATION expresses the mutual influence of the faculties.

The principles of Association must be sought for in the constitution of the faculties, and not in the relations of particular ideas. In using Association as an instrument of artificial memory, we ought to keep always in view, that every individual will associate, with greatest facility, ideas with those particular things which he has the greatest natural facility in perceiving. For example: He who has Number most powerful, will associate words most easily with numbers; he who has Form most power-

ful, will associate words most easily with shapes ; he who has Locality most powerful, will associate words most easily with position ; and he who has Tune most powerful, will associate words most easily with musical notes.

Hence, also, the influence of Association on our Judgment is easily accounted for. He in whom Veneration is powerful, and to whom the image of a saint has from infancy been presented as an object to be venerated, experiences an instantaneous and involuntary emotion of awe and respect every time the image is presented to him, or a conception of it formed, because it is now a sign which excites in him that feeling, and the latter excludes the reflecting faculties from performing their functions. Hence, until we can break this association, and prevent the conception of the image from operating as a sign to excite the faculty of Veneration into activity, we shall never succeed in bringing his understanding to examine into the real attributes of the object itself, and to perceive its want of every quality that ought justly to be venerated.

Thus, the associations which mislead the judgment, and perpetuate prejudices, are associations of words or things with *feelings* or *sentiments*, and not associations merely of ideas with ideas.

PLEASURE and PAIN, and also JOY and GRIEF, are affections of the mind arising from the exercise of every faculty. Every faculty, when indulged in its natural action, feels pleasure ; when disagreeably affected, feels pain ; consequently the kinds of pain and pleasure are as numerous as the faculties.

PASSION is the highest degree of activity of any faculty, and the passions are as different as the faculties : Thus a passion for glory is the result of great energy and activity of the faculty of LOVE OF APPROBATION ; a passion for money, of ACQUISITIVENESS ; a passion for music, of TUNE ; a passion for metaphysics, of CAUSALITY.

SYMPATHY is not a faculty, nor is it synonymous with moral approbation. The same notes sounded by ten instruments of the same kind, harmonize, blend softly together, and form one peal of melody. The cause of this is to be found in the similarity of the constitution and state of the strings. Each faculty of the human mind has a specific constitution ; and, in virtue of it, produces specific kinds of feelings, or originates or suggests specific kinds of ideas ; and wherever similar faculties are active in different individuals, similar feelings are experienced by each, and similarity of feeling is sympathy.

Sympathy is not synonymous with moral approbation. We *approve* of the actions produced by the lower faculties of others, only when these are guided by the faculties proper to man : we never approve of Combativeness, when indulged for the mere pleasure of fighting ; but we approve of the action of this faculty when directed by justice and understanding. We approve of the action of the sentiments proper to man, unmingled with any other motive, when directed by enlightened intellect.

HABIT is defined to be “ a power in man of doing a thing, acquired by frequently doing it.” Now, before it can be done at all, the faculty and organ on which it depends must be possessed in an available degree ; and the more powerful these are, the greater will be the energy with which the possessor will do the thing at first, and the ease with which he will learn to repeat it. Habit, therefore, is the result of facility acquired by exercise. It is the organ which acquires activity and superior facility in performing its functions, by being properly used, just as the fingers of a musician attain increased rapidity and facility of motion by the practice of playing.

TASTE is the result of the HARMONIOUS ACTION of the faculties generally, in at least a moderate degree of vigour. Thus, the most beautiful poetry is that by which gratification is afforded to the higher sentiments and intellectual powers, without the introduction of any extravagance, absurdity, or incongruity, to offend any one of them. If Ideality be in excess, this may produce bombast; if Causality predominate too much, it may introduce unintelligible abstractions; if Wit be excessive, it may run into conceits, epigrams, and impertinences. A picture is in best taste when it delights the Knowing Faculties, Reflection, and the Moral Sentiments, without offending any of them.

PRACTICAL DIRECTIONS FOR OBSERVING DEVELOPMENT.

As “self-conviction can be obtained only by self-observation,” every one who desires to become a Phrenologist should learn to observe. Phrenology, like medicine, is an *estimative*, and not a demonstrative science. Degrees of vigour in the faculties, and of size in the organs, may be *estimated* by means of observation and judgment, ripened by experience; but they cannot be exactly measured by numbers or degrees of space. A healthy brain, at a vigorous period of life, is the proper subject for observation; and as the fundamental principle of the science is, that the *power* or *energy* of mental manifestation bears a uniform relation, *other conditions being equal*, to the *size* of the organs, we must be careful not to confound this quality of mind with that of mere *activity*. Size in the organ sets limits to Power, while Activity depends on temperament and exercise.

Many members of the learned professions display great felicity of illustration and fluency of elocution, surprising us with the quickness of their parts, who, nevertheless, are felt to be neither impressive nor profound. They possess acuteness without power, and ingenuity without comprehensiveness and depth of understanding. This proceeds from *activity* with *little vigour*. There are other public speakers, again, who open heavily in debate, their faculties acting slowly, but deeply, like the first heave of a mountain-wave. But even their first accent is one of power—it rouses and arrests attention; their very pauses are expressive, and indicate gathering energy to be embodied in the sentence that is to come. This is an example of *power*.

It is proper to begin with observation of the more palpable differences in size. The anterior lobe of the brain, which manifests intellect, is estimated by the projection of the head before a line raised from the most projecting point of the zygomatic arch, behind the cheek bone. The coronal region, which manifests the moral sentiments, is estimated by drawing a line through the centres of Cautiousness and Causality, and estimating the extent to which the brain rises above the plain of that line. All below this line, and behind the first line, constitutes the region of the animal feelings. These lines are represented on the head of Maxwell, p. 31. Large size may consist in length or breadth, or in both. After becoming familiar with the general size and configuration of heads, and learning to appreciate the proportions which the three orders of organs bear to each other, the student may proceed to the *observation of individual organs*; and in studying them, the real dimensions, and not the mere prominence of each organ, should be looked for. Practice, with at least an average endowment of the organs of Form, Size, and Locality,

are necessary to qualify a person to make observations with success. The student should learn from books, plates, and casts, or personal instruction (and the last is by far the best), to distinguish the *form* of each organ, and its *appearance*, when developed in different proportions to the others. The phrenological bust shews only the *situations* of the organs, and their proportions in *one* head ; and it is impossible by it to communicate more information. The different appearances in all the varieties of relative size, must be discovered by inspecting *a number* of heads ; and especially by contrasting instances of extreme development with others of extreme deficiency. No adequate idea of the foundation of the science can be formed until this be done. In cases of extreme size of single organs, the form delineated in the bust is generally perceived standing out in nature.

The terms used to denote the gradations of size in the different organs, in an increasing ratio, are

Very small	Moderate	Rather large
Small	Rather full	Large
Rather small	Full	Very large

It ought to be kept constantly in view, in the practical application of Phrenology, that it is the size of each organ in proportion to the others *in the head of the individual observed*, and not their *absolute size*, or their size in reference to any standard head, that determines the predominance *in him* of particular talents or dispositions. The Phrenologist never compares mental ability in general with size of brain in general ; for the fundamental principle of the science is, that different parts of the brain have different functions, and that hence the *same absolute quantity* of brain, if consisting of intellectual organs, may be connected with the highest genius, while, if consisting of the animal organs, lying immediately above and behind the ears, may indicate the most fearful energy of the lower propensities.

Nature admits of no exceptions, and a single instance of decidedly vigorous manifestations, with decidedly small organs, such as are represented in this Idiot, disease being absent, would overturn all previous observations in favour of Phrenology. But men are liable to err ; and although an individual Phrenologist may have called an organ small, the manifestations of which are powerful, or *vice versa*, this is not to be precipitately charged against the science, nor against nature as an exception. Chemists occasionally fail in experiments, mathematicians err in demonstrations, and arithmeticians are wrong in calculations ; and, in like manner, Phrenologists may commit mistakes in observing cerebral development.

IDIOT.



COMBINATIONS IN SIZE.

Every sane individual possesses all the organs, but they are combined in different degrees of relative size in different persons ; and the manifestations of each organ are modified in some degree by the influence of those with which it is combined. The effect of combination, however, is not to change the proper functions of the different organs, but only to modify the *manner and direction* in which they are manifested, or the acts in which they seek gratification.

Three rules may be laid down for estimating the effects of differences in relative size, occurring in the organs of the same brain.

RULE FIRST.—Every faculty desires gratification with a degree of energy proportionate to the size of its organ; and those faculties will be habitually indulged, the organs of which are largest in the individual. The condition, *cæteris paribus*, is always understood, and therefore need not be repeated, in treating of the effects of size.

Examples.—If the animal organs be large, and the organs of the moral sentiments and intellect small, the individual will be naturally prone to animal indulgence in the highest degree, and disposed to seek gratification in the directest way, and in the lowest pursuits. Pope Alexander VI. is an example of this combination, and his manifestations corresponded.

Pope ALEXANDER VI.



MELANCTHON.



If, on the other hand, the organs of the moral sentiments and intellect greatly predominate, the individual will be naturally prone to moral and intellectual pursuits; such persons are “a law unto themselves.” Melancthon the great and virtuous reformer, is an example of this combination.

RULE SECOND.—As there are three kinds of faculties, Animal, Moral, and Intellectual, which are not homogeneous in their nature, it may happen that several large animal organs are combined in the same individual, with several moral and intellectual organs highly developed. The rule will then be, that the lower propensities will take their *direction* from the higher powers; and such a course of action will be habitually followed, as will be calculated to gratify the whole faculties whose organs are large.

Examples.—If the organs of Acquisitiveness and Conscientiousness be both large, stealing might gratify Acquisitiveness, but it would offend Conscientiousness. According to rule second, the individual would endeavour to gratify both, by acquiring property by lawful industry. If both Combativeness and Destructiveness be large, and Benevolence and Conscientiousness be as fully developed, it follows that while wanton outrage and indiscriminate attack might gratify the first two faculties, they would outrage the last two; and hence the individual would seek for situations calculated to gratify all four; and these may be found in the ranks of an army embodied for the defence of his country; or the same object may be obtained by moral and intellectual warfare against the patrons of corruption and abuses in Church and State. Luther, Knox, and many other benefactors of mankind, were probably actuated by such a combination of organs.

If, in an individual, the cerebellum be very large, and Philoprogenitiveness, Adhesiveness, and Conscientiousness be deficient, he will be prone to seek the directest gratifications of the animal appetite; if the latter

organs be large, he will perceive that wedlock affords the only means of pleasing the whole group of faculties.

If Benevolence, Self-Esteem, and Acquisitiveness be all large, giving charity may gratify the first; but unless the individual be very rich, the act of parting with property may be disagreeable to the last two faculties: he would therefore prefer to gratify Benevolence by personal kindness; he would sacrifice time, trouble, influence, and advice, to the welfare of others, but not property. If Benevolence were *small*, with the same combination, he would not give either money or personal service.

RULE THIRD.—Where all the organs appear in nearly equal proportions to each other, the individual, if left to himself, will exhibit opposite phases of character, according as the animal propensities or moral sentiments predominate for the time. He will pass his life in alternate sinning and repenting. If external influence is brought to operate upon him, his conduct will be greatly modified by it; if placed, for instance, under severe discipline and moral restraint, these will cast the balance, for



the time, in favour of the higher sentiments; if exposed to the solicitations of profligate associates; the animal propensities will probably obtain triumphant sway. MAXWELL, who was executed for housebreaking and theft, is an example of this combination. In him the three orders of organs are amply developed; while subjected to the discipline of the army, he preserved a fair reputation; but when he fell into the company of thieves, he adopted their practices, and was hanged. The

lines are explained on page 28.

Talents for different intellectual pursuits depend on the combinations of the knowing and reflecting organs in certain proportions. Form, Size, Colouring, Individuality, Ideality, Imitation, and Secretiveness, large, with Locality small, will constitute a portrait, but not a landscape painter. Diminish Form and Imitation, and increase Locality, and the result will be a talent for landscape, but not for portrait, painting. Constructiveness and Weight combined with Tune large, may produce a talent for *musical* instrument making: without a large Tune, the other faculties could not take this direction. Constructiveness combined with Size and Number large, may lead to *mathematical* instrument making: Causality combined with large Secretiveness, Ideality, and Imitation, will seek to discover the philosophy of the fine arts; the same organ combined with Benevolence, Conscientiousness, and Concentrativeness large, will delight in moral and political investigations.

The doctrine of the primitive functions of the faculties, explained in the first part of this work, and of the combinations now laid down, shews *why* Phrenology does not enable us to predict *actions*. Destructiveness, for example, is not a tendency to kill a man or a beast, as a specific act, but a mere general propensity capable of leading to destruction as its ultimate result, but which may be manifested in a great variety of ways (many of them justifiable, others unjustifiable), according as it is directed by the other faculties, which, in each particular instance, act along with it:—thus, acting along with large Acquisitiveness, and in the absence of Conscientiousness, it may prompt to murder;—while, acting along with large Conscientiousness and Benevolence, it may deter persons from crime by the chastisement which it inflicts on those who infringe the law.

ON MATERIALISM.

The question of Materialism is, Whether the *substance* of which the thinking principle is composed be matter or spirit? And the effect of our decision, let it be observed, is not to *alter the nature of that substance*, whatever it be, but merely to adopt an opinion consonant with, or adverse to, a fact in nature over which we have no control. Mind, with all its faculties and functions, has existed since the creation, and will exist till the human race shall become extinct; and no opinion of man, concerning the cause of its phenomena, can have the least influence over that cause itself. The mind is invested, by nature, with all its properties, and it will possess, and manifest them, let men think, and speak, and write what they will, concerning its substance. If the Author of Nature have invested the mind with the quality of endless existence, it will, to a certainty, flourish in immortal youth in spite of every appearance of premature decay. If, on the other hand, Nature have limited its existence to this passing scene, and decreed that it shall perish for ever when the animating principle passes from the body, then all our conjectures, arguments, discussions, and assertions, respecting its immortality, will not add one day to its existence. The opinions of man, therefore, concerning the substance of the mind, can have no influence whatever in changing or modifying that substance itself; and if so, as little can these opinions undermine the constitution of the mind, or its relations to time and eternity, on which, as their foundations, morality and religion must, and do, rest as on an immutable basis. According to Phrenology, morality and natural religion originate in, and emanate from, the primitive constitution of the mental powers themselves. Innumerable observations have proved, that faculties and organs of Benevolence, Hope, Veneration, Justice, and Reflection exist. Now, our believing that the mind will die with the body, will not pluck these sentiments and powers from the soul; nor will our believing the mind to be immortal implant a single one more of them in our constitution. They would all remain the same in functions and constitution, and render virtue amiable and vice odious, although we should believe the mind to be made of dust, just as they would do were we to believe the mind to be a more immediate spiritual emanation from the Deity himself.

We are conscious only of feelings and emotions, of conceptions and thoughts; but whether these originate from matter or spirit—whether God, in creating man, was pleased to invest his material organs with the property of thought, or to infuse into him a portion of immaterial fire—consciousness gives us no information. A great deal of popular delusion has been kept alive on this subject, by the fact being overlooked, that we are not conscious of the operations of the brain. Men in general, because they are sensible only of thought and feeling, and not of the movements of any material organs performing these acts of the mind, imagine that it is necessarily an immaterial substance which is thinking and feeling within them; but they are equally unconscious of the contraction and relaxation of the muscles, and they might as well imagine that their arms and legs are moved, not by material organs, but by the direct impulse of spirit, as entertain the supposition in question. In short, the truly philosophical conclusion is, that, by means of consciousness, we are unable to discover of what substance the thinking principle is composed.

Observation reveals as little in regard to the substance of the mind as does reflection on consciousness. The brain presents nothing to our contemplation but an inert mass, of a soft and fibrous texture, in which no thought can be discerned and no sentiment can be perceived, and in which also no spirit or immaterial substance can be traced ; so that from inspecting it, even imagination receives no food for conjecture as to the presence or absence of an immaterial guest, while life and health yet animated its folds. As no other modes of arriving at certain knowledge are open to man, the solution of the question appears to be placed completely beyond his reach.

The solution of this question, therefore, is not only impossible but unimportant ; and this leads me to observe, that no idea can be more erroneous than that which supposes the dignity and future destiny of man as an immortal being to depend, of necessity, on the substance of which he is made.

Let us allow to the materialist, for the sake of argument, that the brain is the mind, and that medullary matter thinks,—what then ? If in fact it do so, it must be the best possible substance for thinking, just because the CREATOR selected it for the purpose, and endowed it with this property. In this argument the religious constantly forget that the same OMNIPOTENT hand made the brain that created the mind and the universe itself, and that, in the dedication of every cerebral convolution to its object, be they thinking or any other process, the Divine Wisdom is as certainly exercised, as in impressing motion on the planets, or infusing light and heat into the sun. If, therefore, *de facto*, GOD have made the brain to think, we may rest assured that it is exquisitely and perfectly adapted for this purpose, and that His objects in creating man will not be defeated on account of his having chosen a *wrong substance* out of which to constitute the thinking principle. But what *are* His objects in creating man ?

The true way of discovering for what end man has been created, is to look to the *qualities* with which he has been endowed, trusting that the substance of which he is composed is perfectly suited to the objects of his creation. When we enquire into the qualities, we find the thinking principle in him to differ, not only in *degree*, but in *kind*, from that of the lower animals. The latter have no faculty of Justice, to indicate to them that the unrestrained manifestation of Destructiveness or Acquisitiveness is wrong ; they have no sentiment of Veneration to prompt them to adore a God ; they have no faculty of Hope, pointing out futurity as an object of ceaseless contemplation, and leading them to desire a life beyond the grave ; and, indeed, the convolutions of the brain, which in man form the organs of these sentiments, do not exist in the lower animals. Those organs also, which in man serve to manifest the faculties of Reflection, are, in the lower animals, eminently deficient ; and their understanding, in exact correspondence with this fact, is so limited as to be satisfied with little knowledge, and to be insensible to the comprehensive design and glories of creation. Man, then, being endowed with qualities which are denied to the lower creatures, we are entitled, by a legitimate exercise of *reflection*, the subject being beyond the region of the external senses, to conclude, on principles truly philosophic, that he is designed for another and a higher destiny than that which is allotted to them, whatever be the *essence* of his mind.

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